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(54) Title: SELF-CONFIGURING, SELF-OPTIMIZING WIRELESS LOCAL AREA NETWORK SYSTEM

(57) Abstract: A system and associated method provides for a wireless local area network (WLAN) that permits mobile units to communicate with an external, wired network. Nodes in the WLAN include multiple components, such as a base module, antenna module, and one or more wireless modules. Indeed, this system can employ two or more wireless modules that employ different short-range wireless protocols, such as IEEE 802.11-type and Bluetooth protocols. The nodes may perform self-discovery to determine modules within the node and associated functionality, as well as identify neighboring nodes to thereby establish a mesh-type network. Nodes can be configured to provide connectivity to the wired network, while others (access points) communicate wirelessly with mobile devices. The nodes may then be interconnected wirelessly, or via wires.

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